

What is claimed is:

1. An image processing apparatus comprising:

an image input section which inputs two adjacent images, wherein the images partially overlap with each other;

an overlap region determining section which determines an overlap region of the images;

a first region determining section which determines a first region within the overlap region determined;

a first pixel value determining section which determines a pixel value in the first region based on a pixel value of one of the two adjacent images;

a second pixel value determining section which determines a pixel value in a second region within the overlap region based on respective pixel values of the two adjacent images, wherein the second region is a region of the overlap region other than the first region; and

an image joining section which join the two adjacent images with each other by utilizing the determined pixel value in the first region and the determined pixel value in the second region as pixel values in respective regions of the overlap region.

2. An image processing apparatus according to claim 1, wherein said first region determining section includes dividing means for dividing the overlap region into

predetermined blocks, and comparing means for comparing the two images with respect to pixel values of the predetermined blocks, the first region being determined based on the result of the comparison by the comparing means.

3. An image processing apparatus according to claim 2, wherein said comparing means includes judging means for judging whether or not the sum of absolute values of pixel value differences obtained on a predetermined block basis between the two images is equal to or greater than a threshold value.

4. An image processing apparatus according to claim 3, when said sum is judged to be equal to or greater than the threshold value by the judging means, said first region determining section determines the relevant block as the first region.

5. An image processing apparatus according to claim 3, when said sum is judged to be smaller than the threshold value by the judging means, said first region determining section determines the relevant region as the first region if the relevant region meets a predetermined condition.

6. An image processing apparatus according to claim 1, wherein said second pixel value determining section determines a pixel value by weighted mean processing related with a position.

7. An image processing apparatus according to claim 1, wherein said first pixel value determining section includes judging means for judging which one of the two adjacent images is close to the determined first region when images are joined with each other, the image which is judged to be closer being utilized as one of the images, the pixel value in the first region being determined based on the pixel value of the one image.

8. An image processing apparatus according to claim 1, wherein said first pixel value determining section includes contrast comparing means for comparing the two adjacent images with respect to a contrast of pixels in the determined first region, one of the images being determined based on a the result of comparison by the contrast comparing means, the pixel value in the first region being determined based on the pixel value of the one image.

9. An image processing method comprising the steps of:
capturing a plurality of images, adjacent ones of which partially overlap with each other;
determining an overlap region where two adjacent ones of the images captured overlap with each other;
determining a first region within the overlap region determined;
determining a pixel value in the first region based on a pixel value of one of the two adjacent images;

determining a pixel value in a second region within the overlap region based on respective pixel values of the two adjacent images, the second region being a region of the overlap region other than the first region; and

joining the two adjacent images with each other by utilizing the determined pixel value in the first region and the predetermined pixel value in the second region as pixel values in respective regions of the overlap region.

10. A program product for making a computer execute image processing method comprising the steps of:

capturing a plurality of images, adjacent ones of which partially overlap with each other;

determining an overlap region where two adjacent ones of the images captured overlap with each other;

determining a first region within the overlap region determined;

determining a pixel value in the first region based on a pixel value of one of the two adjacent images;

determining a pixel value in a second region within the overlap region based on respective pixel values of the two adjacent images, the second region being a region of the overlap region other than the first region; and

joining the two adjacent images with each other by utilizing the determined pixel value in the first region and the predetermined pixel value in the second region as

pixel values in respective regions of the overlap region.